



**FEMA**

OCT 18 2012

Mr. Elmo E. Collins  
Regional Administrator  
U.S. NRC Region IV  
1600 East Lamar Boulevard, Suite 400  
Arlington, Texas 76011-4511

Dear Mr. Collins:

Enclosed is the final report for the September 17-19, 2012, medical drills, site-specific to the Fort Calhoun Nuclear Station. The participants in this exercise were the Nebraska Emergency Management Agency and Washington County in Nebraska; and the Iowa Homeland Security & Emergency Management and Pottawattamie County in Iowa. The report was prepared by Federal Emergency Management Agency Region VII staff. This final report will also be provided to the states of Nebraska and Iowa.

There were no Deficiencies, Areas Requiring Corrective Action nor planning issues identified as a result of these drills.

Based on the results of these drills, the offsite radiological response plans and preparedness for the State of Nebraska, State of Iowa, and affected local jurisdictions can be implemented and are adequate to provide reasonable assurance that appropriate measures can be taken offsite to protect the health and safety of the public in the event of a radiological emergency at the site. Therefore, the Title 44 CFR, Part 350 approval of the offsite radiological emergency response plans and preparedness for the states of Nebraska and Iowa in support of the Fort Calhoun Nuclear Station, granted on July 22, 1981, will remain in effect.

AX45  
NRR

If you have any questions or concerns regarding the report, please contact Mr. Ronald L. McCabe, Regional Assistance Committee Chair, at 816-283-7007 or by email [ron.mccabe@fema.dhs.gov](mailto:ron.mccabe@fema.dhs.gov).

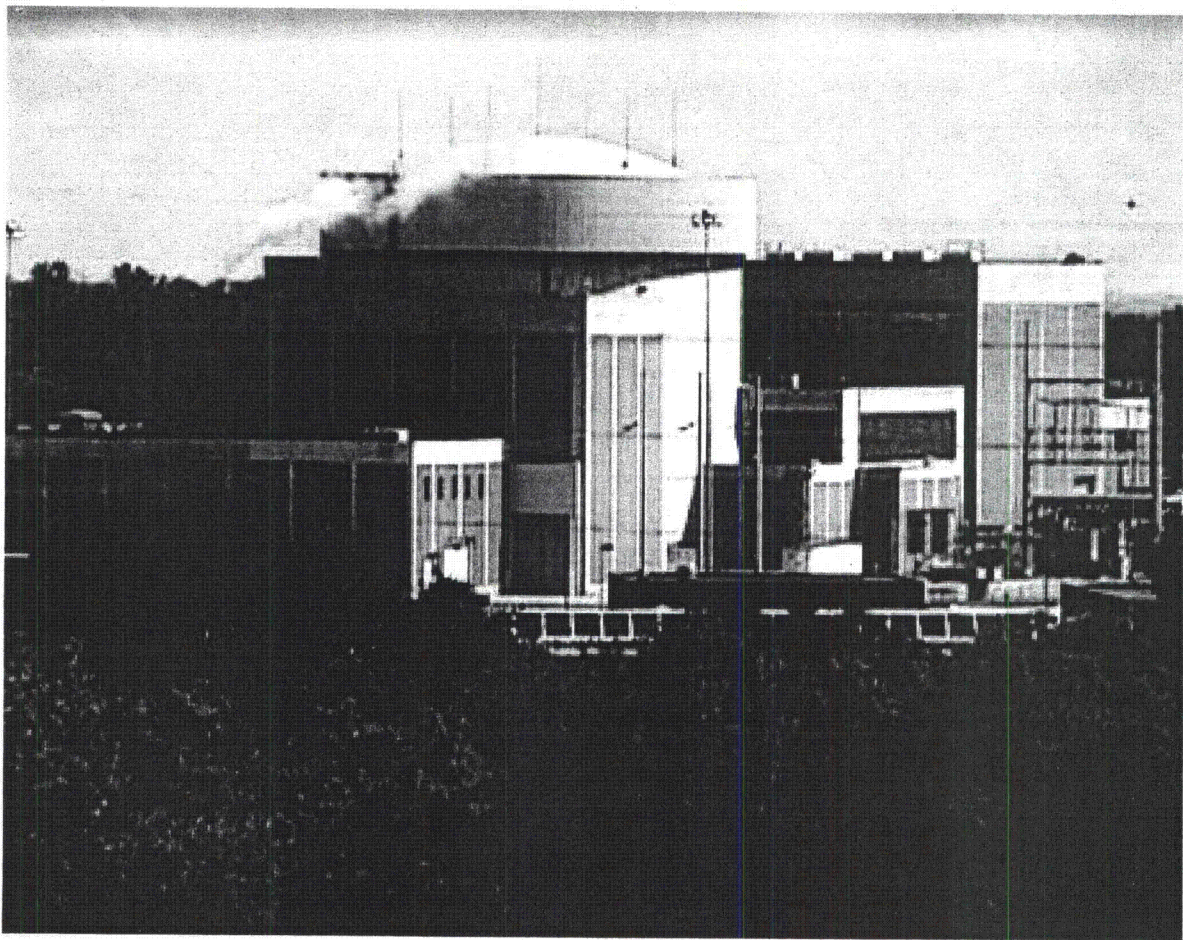
Sincerely,

A handwritten signature in cursive script, appearing to read "Beth Freeman".

Beth Freeman  
Regional Administrator

Enclosure

cc: NRC HQ, Document Control Desk  
NRC NSIR (electronic)  
Bill Maier, NRC IV w/o enclosure (electronic)  
Vanessa Quinn, HQ REP w/o enclosure (electronic)  
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Fort Calhoun Nuclear Station

# After Action Report/ Improvement Plan

Drill Date - September 17, 2012

Radiological Emergency Preparedness (REP) Program



**FEMA**

*Published October 12, 2012*

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# Fort Calhoun Nuclear Station After Action Report/Improvement Plan

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## EXECUTIVE SUMMARY

On September 17-19, 2012 the Federal Emergency Management Agency (FEMA), Region VII, conducted out-of-sequence medical drills in the plume emergency planning zone (EPZ) around the Fort Calhoun Nuclear Station which is operated by the Omaha Public Power District. The purpose of these drills was to assess the level of State and local preparedness in responding to a radiological emergency. These drills were held in accordance with FEMA's policies and guidance concerning the exercise of State and local radiological emergency response plans and procedures.

The previous medical drills at these sites were conducted on September 14, 2010 for Blair Fire and Rescue; and on September 15, 2010, for the University of Nebraska Medical Center and the Missouri Valley Fire and Rescue. The qualifying emergency preparedness exercise for this Power Plant was conducted on July 22, 1981.

FEMA wishes to acknowledge the efforts of all who participated in and supported these drills. In the State of Nebraska, the Risk County of Washington and the University of Nebraska Medical Center participated. In the State of Iowa, the Risk County of Harrison participated. The efforts of the utility, the State of Iowa and the State of Nebraska are also noted for their work on training and drill preparation.

Protecting the public health and safety is the full-time job of some of the exercise participants and an additional assigned responsibility for others. Still others have willingly sought this responsibility by volunteering to provide vital emergency services to their communities. A special thank you is once again extended to those invaluable volunteers. Cooperation and teamwork of all the participants were evident during these drills.

The State and local organizations demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. No Areas Requiring Corrective Action (ARCAs) or Deficiencies were identified as a result of these drills. There were no previous ARCAs nor any Deficiencies to be corrected during these drills.

## **SECTION 1: EXERCISE OVERVIEW**

### **1.1 Exercise Details**

**Exercise Name**

Fort Calhoun Nuclear Station

**Type of Exercise**

Drill

**Exercise Date**

September 17, 2012

**Program**

Department of Homeland Security/FEMA Radiological Emergency Preparedness Program

**Scenario Type**

Radiological Emergency

### **1.2 Exercise Planning Team Leadership**

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### **1.3 Participating Organizations**

Agencies and organizations of the following jurisdictions participated in the Fort Calhoun Nuclear Station drill:

Risk Jurisdictions  
    Blair Fire and Rescue  
    Missouri Valley Fire and Rescue  
Support Jurisdictions

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University of Nebraska Medical Center

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## **SECTION 2: EXERCISE DESIGN SUMMARY**

### **2.1 Exercise Purpose and Design**

The purpose of the exercises and drills conducted in association with the Fort Calhoun Nuclear Station (FCNS) is to test and evaluate emergency plans associated implementing procedures, facilities, and equipment of the emergency responders and supporting entities in the communities in the immediate vicinity of FCNS, specifically within the 10- mile emergency planning zone (EPZ).

Further, these exercises and drills test the FCNS emergency response community's ability to assess and respond to emergency conditions and coordinate efforts with other agencies for protection of the health and safety of the public.

The conduct and evaluation of these exercises and drills provide additional training for emergency response organization personnel as a means to enhance FCNS emergency response capability.

The purpose of this particular drill was to activate and evaluate portions of the Washington and Harrison Counties' Emergency Plans and associated implementing procedures, in accordance with 44 CFR 350.

The scenario for this drill was developed by personnel at the Fort Calhoun Nuclear Station, then was reviewed and approved for use by FEMA Region VII. The scenario was utilized by the exercise controllers and evaluators as the control mechanism for the conduct of the drill.

The scenario for this drill was designed to depict a sequence of events during a radiological accident at the Fort Calhoun Nuclear Station, located near Fort Calhoun, in Washington County, Nebraska, that result in the need for the assessment and care of injured and potentially contaminated victims.

The scenario design provided the basis to observe and evaluate the capabilities and effectiveness of the Emergency Response Plans for Blair Fire and Rescue, Missouri Valley Fire and Rescue, and the University of Nebraska Medical Center.

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## 2.2 Exercise Objectives, Capabilities and Activities

The Fort Calhoun Nuclear Station (FCNS) Emergency Preparedness Exercise & Drill Program objectives are based on the Federal requirements delineated in 44 CFR 350, as well as on the priorities and procedures detailed in the Radiological Emergency Preparedness plans for the State of Nebraska; the State of Iowa; Dodge, Douglas, Sarpy and Washington Counties in Nebraska; and Harrison and Pottawattamie Counties in Iowa. Additional guidance provided in the REP Program Manual, NUREG-0654, NUREG-0696, and NUREG-0737, was utilized in developing these objectives.

The FCNS emergency plan describes FCNS' capability to respond effectively to a radiological emergency at the site, and provides a detailed description of FCNS' interaction with Federal, State, and local government agencies and private organizations. The emergency plan provides for continuous emergency preparedness including the conduct of an annual exercise and preparatory drills.

The objective of this drill was to test the implementation of the plans and procedures of the participating agencies, and the capability of these agencies to conduct operations in accordance with these plans. This objective is further defined by the criteria evaluated for each participant. These criteria are listed in Table 3.1.

The capabilities tested in this drill were related to medical care rendered during a radiological emergency, during which actual or possible radiological contamination would require the use of additional measures than in non-radiological medical care. Each ambulance service and the hospital were evaluated based upon the plans and procedures which they have established for use in a radiological emergency.

These drills were performed out-of-sequence, which is not concurrent to a full scale exercise not in synchronized time with other sites. To compensate for the artificiality of an out-of-sequence drill, the activities for each evaluation included an allowance for simulation. This allowed for the evaluators to focus on the activities specified in the drill criteria, which are usually those least familiar to the exercise players. For example, each ambulance service was permitted to simulate the location of the accident site and demonstrated all treatment at their ambulance stations, up to loading the patient into the ambulance but short of actual transport to another site. These teams drive their vehicles to real emergency accident sites on a daily basis; their

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capabilities in this area were not in the focus of the evaluation.

All other aspects of treatment were performed, unless the controller and evaluator agreed to allow simulation. An example of this was the agreement to allow for the simulation of the removal of the victim's clothing, even though this is the action that would have taken place in a real world scenario. The evaluator confirmed this through interview, thus sparing the volunteer victim of an unnecessary and potentially embarrassing discomfort. None of the simulations compromised the ability to demonstrate and evaluate the objective of the drill.

## **2.3 Scenario Summary**

The Blair Fire and Rescue squad and UNMC teams were given the following scenario:

Fort Calhoun Station is in a General Emergency with an ongoing release. An evacuation of Sub-Areas 1, 2 and 3 in Nebraska and Sub Area 10 in Iowa was ordered at 0800. The evacuation is underway and traffic and access control points are in the process of being manned. Wind is blowing in a westerly direction (258 degrees at 3 miles per hour).

Omaha Public Power District Field teams that have been transversing along County Road P-35 and P-33 awaiting the plumes arrival come upon a bicyclist in the area of Emergency Receptor N04-02 (the intersection of County Roads P-33 and P35). The cyclist has been off road biking in the area and has crashed. Causing injuries and abrasions to the left side of his face, left palm and left knee. The Field team Contacts the Emergency Operations Facility (EOF) Field Team Specialist via radio. The EOF notifies the Washington County Emergency Operations Center.

The Missouri Valley Fire and Rescue squad was given a scenario as the above, only with the location of the victim changed to Emergency Receptor E06-12, the intersection of Grover avenue and 335th Street and with wind blowing in a easterly direction (90 degrees at 3 miles per hour).

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## **SECTION 3: ANALYSIS OF CAPABILITIES**

### **3.1 Drill Evaluation and Results**

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities which participated in the September 17-19, 2012, drill events to test the offsite emergency response capabilities of State and local governments in the 10-mile EPZ surrounding the Fort Calhoun Nuclear Station.

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of criteria contained in exercise evaluation areas delineated in Emergency Preparedness: Exercise Evaluation Methodology as printed in the REP Program Manual, August 2012.

### **3.2 Summary Results of Drill Evaluation**

Exercise criteria are listed by number and the demonstration status of those criteria is indicated by the use of the following letters:

M - Met (No Deficiency or ARCAs assessed and no unresolved ARCAs from prior exercises)

D - Deficiency assessed

A - Area Requiring Corrective Action (ARCA) assessed or unresolved ARCA(s) from prior exercises)

N - Not Demonstrated (Reason explained in subsection B)

Criteria with no corresponding letter were not evaluated in this drill.

Table 3.1 - Summary of Drill Evaluation

<p style="text-align: center;">DATE: 2012-09-17 SITE: Fort Calhoun Nuclear Station, NE  M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated</p>		MO Vall. Fire/Resc.	UNMC	Blair Rescue Squad
<b>Emergency Operations Management</b>				
Mobilization	1a1			
Facilities	1b1			
Direction & Control	1c1			
Communications Equipment	1d1			
Equipment and Supplies	1e1	M	M	M
<b>Protective Action Decision Making</b>				
EW Exp. Control Decisions	2a1			
PARs	2b1			
PADs	2b2			
PADs for Disabled/Functional Needs	2c1			
Ingestion PADs	2d1			
RRR Decisions	2e1			
<b>Protective Action Implementation</b>				
EW Exp. Control Implementation	3a1	M	M	M
KI Public/Institutionalized	3b1			
PAD Imp. Disabled/Functional Needs	3c1			
PAD Imp. Schools	3c2			
TACP Establishment	3d1			
Impediments to Evacuation	3d2			
Implementation of Ingestion PADs	3e1			
Ingestion Strategies and Information	3e2			
Imp. of RRR Decisions	3f1			
<b>Field Measurement and Analysis</b>				
RESERVED	4a1			
Field Team Management	4a2			
Field Team Operations	4a3			
Field Team Sampling	4b1			
Laboratory Operations	4c1			
<b>Emergency Notification and Public Info</b>				
Initial Alert & Notification	5a1			
RESERVED	5a2			
Backup Alert & Notification	5a3			
Exception Area Alerting	5a4			
Subsequent Public Information	5b1			
<b>Support Operations/Facilities</b>				
Reception Center Operations	6a1			
EW Monitoring & Decon	6b1			
Congregate Care	6c1			
Contaminated Injured Transport & Care	6d1	M	M	M

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## 3.3 Criteria Evaluation Summaries

### 3.3.1 Risk Jurisdictions

#### 3.3.1.1 Missouri Valley Fire and Rescue

Missouri Valley Fire and Rescue is located in the City of Missouri Valley, Iowa approximately 23 miles north of Council Bluffs, Iowa and 11 miles east of the Fort Calhoun Nuclear Station (FCNS). It serves the Iowa portion of the FCNS Emergency Planning Zone, east of the Missouri River.

The Missouri Valley Fire and Rescue team demonstrated very strong knowledge and capabilities in contamination control, along with a focus on ensuring that new members are trained in the specific radiological tasks for which they are responsible.

In summary, the status of DHS/FEMA criteria for this location is as follows:

- a. MET: 1.e.1, 3.a.1, 6.d.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

### 3.3.2 Nebraska Jurisdictions

#### 3.3.2.1 University of Nebraska Medical Center

The University of Nebraska Medical Center is a premier medical facility located in Omaha, Nebraska, approximately 25 miles south of the Fort Calhoun Nuclear Station (FCNS). It is the primary treatment facility for potentially contaminated patients for the FCNS Emergency Planning Zone on both the Nebraska and Iowa sides of the Missouri River.

In addition to their outstanding facilities, the medical and support staff demonstrated high competence in patient monitoring, decontamination and contamination control.

In summary, the status of DHS/FEMA criteria for this location is as follows:

- a. MET: 1.e.1, 3.a.1, 6.d.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

### **3.3.3 Risk Jurisdictions**

#### **3.3.3.1 Blair Rescue Squad - Nebraska**

The Blair Rescue Squad is part of the Blair Fire and Rescue Department, located in the City of Blair Nebraska, approximately 25 miles north of the Omaha, NE metropolitan area and approximately 5 miles from the Fort Calhoun Nuclear Station (FCNS). It serves the Nebraska portion of the FCNS Emergency Planning Zone, west of the Missouri River.

The Blair Rescue Squad demonstrated clear knowledge and capabilities in contamination control, and a dedication to training new members in their tasks.

In summary, the status of DHS/FEMA criteria for this location is as follows:

- a. MET: 1.e.1, 3.a.1, 6.d.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

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## SECTION 4: CONCLUSION

Based on the results these drills, the offsite radiological emergency response plans and preparedness for the State of Nebraska and the State of Iowa and the affected local jurisdictions are deemed adequate to provide reasonable assurance that appropriate measures can be taken to protect the health and safety of the public in the event of a radiological emergency. Therefore, 44 CFR Part 350 approval of the offsite radiological emergency response plans and preparedness for the State of Nebraska and the State of Iowa, site-specific to the Fort Calhoun Nuclear Station, will remain in effect.

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## APPENDIX A: DRILL EVALUATORS AND TEAM LEADERS

The evaluation team consisted of two technical evaluators and the site specialist who served as the Team leader.

DATE: 2012-09-17, SITE: Fort Calhoun Nuclear Station, NE

LOCATION	EVALUATOR	AGENCY
University of Nebraska Medical Center	Jeff Clark Rex Jennings	FEMA RVII FEMA RVII
Missouri Valley Fire and Rescue	Rex Jennings *Laurel Ryan	FEMA RVII FEMA RVII
Blair Rescue Squad - Nebraska	Jeff Clark Rex Jennings	FEMA RVII FEMA RVII
* Team Leader		

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